

The Concepts of Carrying Capacity and Sustainability : How should they inform tourism development?

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Human Carrying Capacity

The number of people whose basic needs can be satisfied by available resources without undue disruption of the environment.

Other issues that might define carrying capacity

- Aesthetics
- Infrastructure/space
- Resources

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RECREATION AND PARKS

VISITOR CARRYING CAPACITY GUIDELINES

Optimum Carrying Capacities for Users

In order to determine appropriate carrying capacities for each park situation, two guides are provided here: Attachment A, "Characteristics of Florida's Major Plant Communities," already discussed, and Attachment B, "Optimum Carrying Capacities for Outdoor Recreation Activities." Attachment B gives the recommended limits on the number of users for most outdoor recreation activities in an attempt to prevent overcrowding, and a recommended land base to assure that sufficient support area and buffer area are provided. A range is given for almost every activity, to allow for differences in each site. The site's classification is a main factor in density variation. For state parks, special feature sites and preserves, the carrying capacities should be reduced to insure compatibility with the management objectives of each category.

**OPTIMUM CARRYING CAPACITY FOR OUTDOOR RECREATION ACTIVITIES
WATER-BASED ACTIVITIES**

Recreation Activity	Required Water/Land Base	Area Requirements	People/Unit of Facility	Turnover Rate
Swimming	min. 1/8 acre of land/ swimmer	50-200 sq. ft. of water and 200-500 sq. ft. of beach/swimmer		2/day
Surfing	min. 1/2 mile of beach for a surfing area, and 1/8 acre of land/surfer	40-100 linear ft. of beach/surfer		2/day
Fishing				
Shoreline	min. 1/4 mile of shoreline for a fishing area, and 1/8 acre of land/fisherman	1 fisherman/20-100 linear feet		2/day
Jetty Pier	min. 1/8 acre of land/ fisherman	1 fisherman/10-40 linear feet		2/day
Boating				
Limited Power (10 HP or less)	min. 200 acres of water, and 1/4 acre of land/boat	1 boat/5-10 acres of water	2/boat	2/day
Unlimited Power	min. 600 acres of water and 1/4 acre of land/boat	1 boat/10-20 acres of water	4/boat	1/day
Water-skiing	min. 600 acres of water and 1/4 acre of land/boat	1 boat/20-50 acres of water	4/boat	1/day
Sailing	min. 200 acres of water and 1/4 acre of land/boat	1 boat/5-10 acres of water	2/boat	2/day
No Power, Still Water	min. 50 acres of water and 1/4 acre of land/boat	1 boat/5-10 acres of water	2/boat	2/day
No Power, Moving	min. 1 mile of stream	2-10 boats/mile	2/boat	2/day

Sustainable development

“Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.”

Bruntland 1987

Garret Hardin 1968 “The tragedy of the commons”

Picture a common pasture – it is to be expected that each herdsman will try to keep as many cattle as possible on the common. Calculating rationally each herder reckons to gain all the proceeds from selling each extra animal which they rear on the commons. Yet the cost of grazing each extra animal in wear and tear on the soil are shared by all (i.e. externalised). Because the land is in common, herders either do not realise or can't afford to care about the full costs of their actions. So carrying capacity becomes exhausted, soil poaches, the grass dies off. Individual freedom in the commons has brought ruin to all.

Economic Development

- All have a “right” to make a living.
- The lessons of human history have shown that the freer people are to define their own economic goals , the harder they work, the “better off” all of us are.
- Attempts by Utopian thinkers to plan entire economies on the basis of defined/perceived reasonable needs have invariably failed.
- BUT free market economies fail in situations of common resource ownership in the absence of market regulation (intervention).

The Environment is too important to be left to ecologists

- At the most fundamental level the environment is the one and only life support system we have.
- There is a tendency for environmentalists/ecologists to be perceived as a separate group with different priorities to wealth creators.
- Do you trust other crucial decisions about your children's survival to other people?

The Challenges

- To understand carrying capacity as a concept that is real, and that we would be better served by attempting to proactively understand and manage it, than to simply leave it to other people or following generations
- To realise that we all have a role to play in actively managing the places we live and work for sustainability.
- To develop systems where common resource users take responsibility for sustainable use of that resource.

**“DEFINING, MEASURING AND EVALUATING
CARRYING CAPACITY
IN EUROPEAN TOURISM DESTINATIONS”
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Final Report